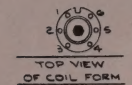
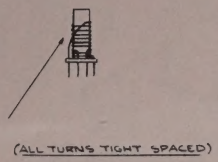
ASSEMBLY AND ALIGNMENT OF VHF PREAMP MODELS P9-( ) AND P14-( )

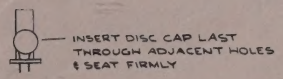
Component Values for Popular Frequencies

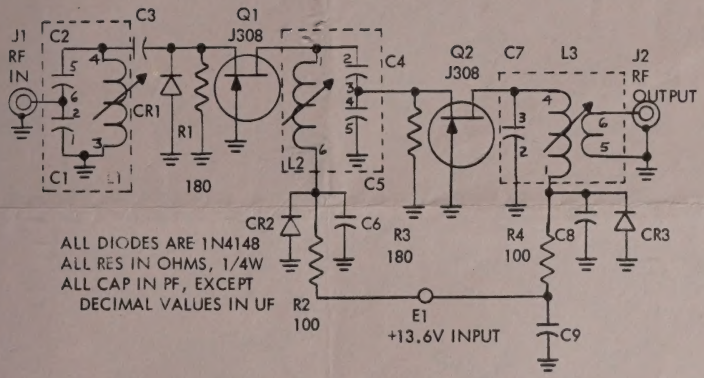
Freq (MHz)	26-34	34-50	50-60	60-88	88-130	130-140	140-155	155-166	166-172	172-200	200-230
C1	100	100	100	100	33	33	33	33	33	33	33
C2	33	33	33	33	15	15	15	15	15	12	12
C3	12	12	12	12	3.9	3.9	3.9	3.9	3.9	2.2	2.2
C4	20	20	20	20	5	5	5	5	5	3.9	3.9
C5	100	100	100	100	20	20	20	20	20	15	15
C6, C8, C9	.001	.001	.001	.001	220	220	220	220	220	100	100
C7	20	20	20	20	6.8	6.8	6.8	6.8	6.8	3.9	3.9
L1-3&4 Turns	13-1/6	7-1/6	5-1/6	3-1/6	4-1/6	3-1/6	2-5/6	2-1/6	2-1/6	2-1/6	1-5/6
L2-1&6 Turns	19-1/6	12-1/6	9-1/6	5-1/6	5-5/6	4-5/6	4-1/6	3-5/6	3-1/6	3-1/6	2-5/6
L3-1&4 Turns	19-1/2	11-1/2	8-1/2	5-1/2	5-1/2	4-1/2	3-1/2	3-1/2	2-1/2	3-1/2	2-1/2
L3-5&6 Turns	2-1/6	2-1/6	1-1/6	1-1/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6

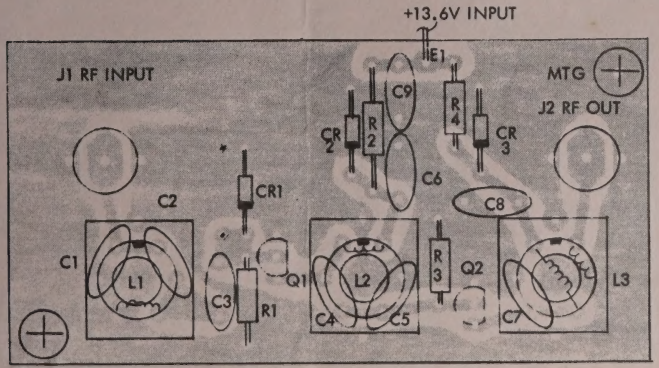
Note: Coil turns are indicated for ham frequencies or band centers. Interpolate or extrapolate for other frequencies. If slug tends to tune fully inserted, add turns & vice-versa.











The P9 or P14 VHF Preamp is a two-stage, grounded gate device, using the new family of Siliconix super fet's designed originally for uhf service. Depending on frequency, the preamp provides a gain of 20-30 dB and a noise figure of 1.5-2 dB.

To install the preamp, refer to the parts location diagram below. Mount it with 4-40 screws and standoffs in opposite corners. Make power connection from pad E1 on the board to +10 to +15 Vdc. Current drain is about 10-20 mA. Coax connections should be made to the phono connectors as indicated for the input and output. CAUTION: Do not install the preamp in the transmit path!

After installation, the tuning slugs should be peaked for maximum response. No neutralization or other critical adjustments are required. Be sure to use proper tuning tool, as incorrect or rounded tool will break slugs. [If you do not have a good tuning tool, we can provide one at a nominal cost of 50¢.]

Although protection diodes are provided, fet's can be damaged by severe transients on the +12V line. It is always good practice to install reverse diodes across relay coils on the same +12V line with solid-state devices.

Most pertinent construction details are shown on the component location and schematic diagrams. Following are details of coil assembly. Coils should be wound as shown, using the solderable wire supplied. All turns are close-spaced. The detail on the diagram is exagerated for clarity, but all leads should be pulled tight. No fancy bends are required. Holes in the base of the form are numbered as indicated. Terminal numbers are given on the schematic next to coil and capacitor leads.

Coils can be prewound and then installed on the board with the keyways oriented as shown. Primaries should be wound first, followed by secondaries, followed by disc capacitor leads (if any). When leads are inserted through the board, all leads should be started into holes in the board while coil form is a little off the board and then seated into place. Do not attempt to insert leads with form tight against board.

After coils are installed, application of heat from a very hot soldering iron for 10-15 seconds with solder applied will automatically strip the wire and allow solder bond to occur. If you prefer, all leads may be stripped in conventional manner before installation on board. Do not solder-strip the leads unless coil is mounted on board or leads may migrate in the plastic form.

Information for tuned circuits given in the chart is for the nominal frequency, eg., the ham band or the center of the commercial bands. However, turns may be added or subtracted proportionately for lower or higher frequencies, respectively.

Note: Components can be confusing at times, even to the experienced. Parts may be marked in various ways. Capacitor values may include a tolerance letter or may be marked in significant figures and multiplier as is done with resistor color codes. For example, 3.9C is 3.9pF ±1/2 pF. 12J is 12pF ±5%. 102 is .001uF.

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